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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,798	08/31/2001	Kazuyuki Matsuoka	0425-0846P	9781

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EXAMINER

NELSON, PETER A

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 06/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

4N

Office Action Summary

Application No.

09/942,798

Applicant(s)

MATSUOKA ET AL

Examiner

Peter A Nelson

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 February 2003.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 9-17, 24-29 and 32 is/are pending in the application.
- 4a) Of the above claim(s) 12, 14, 17, 27 and 28 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 9-11, 13, 15, 24-26 and 29 is/are rejected.
- 7) ☒ Claim(s) 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.*

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Available Copy

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 9-11, 13, 15, 16, 18, 24-26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramaswamy et al in view of Yoshida.

Ramaswamy et al teach a gas generating composition comprising a nitrogen containing organic compound (5-AT), an oxygen containing inorganic oxidizer (any of the four from col. 4, lines 6-9) and manganese dioxide. What is not shown in the reference is the specific surface area characteristic claimed for said manganese dioxide. The Examiner believes that it is obvious to process the 2-5 micron particles such that they have a surface area characteristic of greater than 50 m²/g. Applicants disagree and refer to the declaration of Inv. Tomiyama, one of the inventors, in support thereof. Finally, the Yoshima reference is used to recognize the problem that occurs as to shock sensitivity when manganese dioxide is used as the main oxidizer (col. 2, lines 49-56). For the reason below, the rejection remains, and it is believed to be obvious to use said material in a form that contains a surface area of greater than 50 m²/g.

Applicant's declaration includes a mathematical determination that particles of the size as taught by the reference would have a surface area of less than 1 m²/g. His conclusion is that these particles cannot meet the claimed characteristic absent processing to include fine pores or agglomeration thereof. As disclosed during the interview with applicant's representative, an analysis of what has conventionally been

Art Unit: 3641

prevalent as to surface area characteristics for manganese dioxide would probably be dispositive with regards to this issue of patentability. What was found (and is cited herein) is various references wherein the characteristic varies from 5 m²/g (Otsuka et al) to as high as 350 m²/g (Hoke et al). Apparently, this compound in this claimed form is well known. As a result, it is still believed obvious to one skilled in the art to utilize a form of the Ramasuwanmy et al component which meets applicants' requirements. The particles recited therein may, indeed meet this condition. It is known however, in the art to obtain particles of this surface area characteristic of more than 50 m²/g. Obviously, with a greater surface area, their presence in an airbag inflator composition would only result in faster and more even deployment of said bag.

3. Claim 16 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 3641

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication should be directed to Examiner Nelson at telephone number (703) 306-4166.

Nelson/kn
May 23, 2003



PETER A. NELSON
PRIMARY EXAMINER